

1           1.       (Currently Amended) A method for reducing the servo position error  
2       signal non-linearity during self-servo writing, comprising:  
3           measuring ~~the~~ a write width for all a plurality of heads in a disk drive; and  
4           adjusting a write current for each head in a the disk drive toward a predetermined  
5       level.

1           2.       (Currently Amended) The method of claim 1 further comprising  
2       determining a mean track propagation width for the disk drive, the predetermined level  
3       establishing ~~the~~ a mean track propagation.

1           3.       (Original)     The method of claim 1 wherein the measuring further  
2       comprises determining a mean head width and the adjusting further comprises adjusting  
3       the write current for each head by applying a higher write current to heads smaller than  
4       the mean head width and a lower write current to heads wider than the mean head width.

1           4.       (Original)     The method of claim 1 further comprising verifying the  
2       optimal performance is achieved using the adjusted write currents.

1           5.       (Original)     The method of claim 4 wherein the verifying further  
2       comprises repeating the measuring and adjusting until a track propagation for the disk  
3       drive meets a predetermined criteria.

1           6.       (Original)     The method of claim 5 wherein the predetermined criteria  
2 comprises a predetermined minimum threshold.

1           7.       (Original)     The method of claim 5 wherein the predetermined criteria  
2 comprises a minimum variance in track propagation width.

1           8.       (Currently Amended) A disk drive, comprising:  
2           a plurality of data storage media mounted for simultaneous rotation about an axis;  
3           an actuator for moving each of a plurality of heads relative to an associated data  
4 storage media for reading and writing data to the associated data storage media, and  
5           a disk controller for writing a data pattern to respective data storage media  
6 utilizing each of the plurality of heads, wherein the disk controller measures the write  
7 width for each of the plurality of heads and adjusts a write current for each of the plurality  
8 of heads toward a predetermined level.

1           9.       (Original)     The disk drive of claim 8 wherein the disk controller  
2 determines a mean track propagation width for the disk drive, the predetermined level  
3 establishing a mean track propagation.

1           10.     (Original)     The disk drive of claim 8 wherein the disk controller  
2     measures the write width for each of the plurality of heads by determining a mean head  
3     width and adjusting the write current for each of the plurality of heads by applying a  
4     higher write current to heads smaller than the mean head width and a lower write current  
5     to heads wider than the mean head width.

1           11.     (Original)     The disk drive of claim 8 wherein the disk controller  
2     further verifies that optimal performance is achieved using the adjusted write currents.

1           12.     (Original)     The disk drive of claim 11 wherein disk controller verifies  
2     that optimal performance is achieved by repeating the measuring and adjusting until a  
3     track propagation for the disk drive meets a predetermined criteria.

1           13.     (Original)     The disk drive of claim 12 wherein the predetermined  
2     criteria comprises a predetermined minimum threshold.

1           14.     (Original)     The disk drive of claim 12 wherein the predetermined  
2     criteria comprises a minimum variance in track propagation width.